

Level Measurement

Point level measurement

Vibrating switches

SITRANS LVS200

Overview



SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids.

Benefits

- High resistance to mechanical forces
- Strong vibration resistance to high bulk material loads
- Rotatable enclosure for convenient wiring
- Suitable for low density material: standard version, 20 g/l (1.3 lb/ft³); liquid/solid interface version, 50 g/l (3 lb/ft³) and low density option min. 5 g/l (0.3 lb/ft³)
- Customer desired extensions up to 20 000 mm (787 inch)
- Optional detection of solids within liquid
- Durable short fork option with 165 mm (6.5 inch) insertion length

Application

The standard LVS200 detects high, low, or demand levels of dry bulk solids in bins, silos, or hoppers. The liquid/solid interface version can also detect settled solids within liquids or solids within confined spaces such as feed pipes. It is designed to ignore liquids in order to detect the interface between a solid and a liquid.

A pipe extension version is available with either the standard or liquid/solid interface electronics and fork, separated by a customer supplied 1 inch pipe.

SITRANS LVS200 has an optional 4 to 20 mA output for monitoring buildup on the fork to determine when preventative maintenance should be performed in sticky applications.

The LVS200 has a compact design and can be top, side or angle mounted. The vibrating fork design ensures the tines are kept clean. The unique design of the fork and crystal assembly eliminates false high level readings even if tines become damaged.

A signal from the electronic circuit excites a crystal in the probe causing the fork to vibrate. If the fork is covered by material, the change in vibration is detected by the electronic circuitry which causes the relay to change state after a one second delay. When the fork is free from material pressure, full vibration resumes and the relay reverts to its normal condition.

- Key Applications: dry bulk solids in bins, silos, hoppers or settled solids within liquids (interface version)

Technical specifications


Mode of operation		Rated operating conditions	
Measuring principle	Vibrating point level switch	Installation conditions	
Input		• Location	Indoor/outdoor
Measured variable	High, low, and demand	Ambient conditions	
Measuring frequency		• Ambient temperature	-40 ... +60 °C (-40 ... +140 °F)
• Standard	125 Hz	• Installation category	III
• Liquid/solid interface and short fork version	350 Hz	• Pollution degree	2
Output		Medium conditions	
PNP	Open collector: Permanent load max. 0.4 A, short-circuit and overload protected Turn-on voltage: max. 50 V (reverse protection)	• Process temperature	<ul style="list-style-type: none"> • All except CSA Class II, Group G: -40 ... +150 °C (-40 ... +302 °F) • CSA Class II, Group G: -40 ... +140 °C (-40 ... +284 °F), CSA temperature code T3B
2-wire without contact	Load current: • Min. 10 mA • Max. 500 mA permanent • Max. 2A < 200 ms • Max. 5A < 50 ms Voltage drop on the electronic module: max. 7 V with closed electric circuit Cut-off current with open electric circuit: max. 5 mA	• Max. threaded bushing temperature	80 °C (176 °F)
Relays	SPDT relay DPDT relay	• Max. enclosure surface temperature (Category 2D)	90 °C (194 °F)
• Version with 1 relay		• Max. extension surface temperature (Category 1D)	150 °C (302 °F)
• Version with 2 relays		• Pressure (vessel)	Max. 30 bar g (435 psi g) European Pressure Directive 2014/68/EU: Category 1
Relay delay	<ul style="list-style-type: none"> • From loss of vibration: approximately 1 second • From resumption of vibration: approximately 1 ... 2 seconds 	• Minimum material density	<ul style="list-style-type: none"> • Standard version: approx. 20 g/l (1.2 lb/ft³) • Liquid/solid interface version: approx. 50 g/l (3 lb/ft³) • Optional low density version: approx. 5 g/l (0.3 lb/ft³)
Signal delay	<ul style="list-style-type: none"> • Probe uncovered to covered: approximately 1 second • Probe covered to uncovered: approximately 1 ... 2 seconds 	Design	
Relay fail-safe	High or low, switch selectable	Material	
Alarm output	<ul style="list-style-type: none"> • Relay 8 A at 250 V AC, non-inductive • Relay 5 A at 30 V DC, non-inductive 	• Enclosure	Epoxy coated aluminum
mA output	8/16 mA or 4 ... 20 mA	Process connection	<ul style="list-style-type: none"> • Thread 1½" NPT [(Taper), ANSI/ASME B1.20.1], R ½" [(BSPT), EN 10226], and flange options • Optional sliding bushing with 2" NPT [(Taper), ANSI/ASME B1.20.1] or BSP thread • Thread material: stainless steel 303 (1.4301)
• Resolution	4 ... 20 mA ± 0.1 mA	Tine material	Stainless steel 316L (1.4404), PTFE-coated tines are available upon special request
Sensitivity	High or low, switch selectable	Degree of protection	IP65/Type 4/NEMA 4
		Conduit entry	2 x M20 x 1.5 or 2 x ½" NPT (For FM and CSA approved versions only.)
		Weight	<ul style="list-style-type: none"> • Standard version, no extensions: approx. 2.0 kg (4.4 lb) • Solids/liquids version, no extensions: approx. 1.9 kg (4.2 lb)
		Power supply	<ul style="list-style-type: none"> • 19 ... 230 V AC, +10 %, 50 ... 60 Hz, 8 VA • 19 ... 55 V DC, +10 %, 1.5 W
		Certificates and approvals	<ul style="list-style-type: none"> • CSA/FM General Purpose • CE • CSA/FM Dust Ignition Proof • RCM • ATEX II 1/2 D • CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, available only with power supply options 5 and 6 • ATEX II 1G and 1/2 G Eex ia IIC; ATEX II 1D and 1/2 D, available only with power supply option 5


Level Measurement


Point level measurement

Vibrating switches

SITRANS LVS200

Selection and Ordering data	Article No.
SITRANS LVS200, standard SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids.	7ML5731- 
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾ 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾ 18 ... 50 V DC PNP ¹⁾ 19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾ 7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾ 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾ 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) basic version ⁴⁾⁵⁾	1 2 3 4 5 6 7
Process temperature Without temperature isolator With temperature isolator Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process 150 °C (302 °F)/max. temperature electronics 60 °C (140 °F)] Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process 150 °C (302 °F)/max. temperature electronics 60 °C (140 °F)]	A B C D
Process connection <u>Threaded</u> R 1½" [(BSPT), EN 10226] 1½" NPT [(Taper), ANSI/ASME B1.20.1] G 2" [(BSPP), EN ISO 228-1], sliding sleeve [min. length 500 mm (19.69 inch)] ⁶⁾ 2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)] ⁶⁾ <u>Flanged</u> DN 100 PN 6, EN 1092-1, flat face ⁷⁾ DN 100 PN 16, EN 1092-1, flat face 2" ASME 150 lb B16.5, raised face 3" ASME 150 lb B16.5, raised face 4" ASME 150 lb B16.5, raised face 2" Tri-clamp (DN 50) ISO 2852	A B C D E F G H J K
Extension length <u>Stainless steel 304 (1.4301)</u> Standard length, 235 mm (9.25 inch)	11
Add Order code Y01 and plain text: "Insertion length ... mm" • 300 ... 500 mm (11.81 ... 19.69 inch) • 501 ... 750 mm (19.72 ... 29.53 inch) • 751 ... 1 000 mm (29.57 ... 39.37 inch) • 1 001 ... 1 250 mm (39.41 ... 49.21 inch) • 1 251 ... 1 500 mm (49.25 ... 59.06 inch) • 1 501 ... 1 750 mm (59.09 ... 68.90 inch) • 1 751 ... 2 000 mm (68.94 ... 78.74 inch) • 2 001 ... 2 250 mm (78.78 ... 88.58 inch) • 2 251 ... 2 500 mm (88.62 ... 98.43 inch) • 2 501 ... 2 750 mm (98.46 ... 108.27 inch) • 2 751 ... 3 000 mm (108.31 ... 118.11 inch) • 3 001 ... 3 250 mm (118.15 ... 127.95 inch) • 3 251 ... 3 500 mm (127.99 ... 137.80 inch) • 3 501 ... 3 750 mm (137.83 ... 147.64 inch) • 3 751 ... 4 000 mm (147.68 ... 157.48 inch)	12 13 14 15 16 17 18 21 22 23 24 25 26 27 28

Selection and Ordering data	Article No.
SITRANS LVS200, standard SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids.	7ML5731- 
<u>Stainless steel 316L (1.4404)</u> Standard length, 235 mm (9.25 inch)	31
Add Order code Y01 and plain text: "Insertion length ... mm" 300 ... 500 mm (11.81 ... 19.69 inch) 501 ... 750 mm (19.72 ... 29.53 inch) 751 ... 1 000 mm (29.57 ... 39.37 inch) 1 001 ... 1 250 mm (39.41 ... 49.21 inch) 1 251 ... 1 500 mm (49.25 ... 59.06 inch) 1 501 ... 1 750 mm (59.09 ... 68.90 inch) 1 751 ... 2 000 mm (68.94 ... 78.74 inch) 2 001 ... 2 250 mm (78.78 ... 88.58 inch) 2 251 ... 2 500 mm (88.62 ... 98.43 inch) 2 501 ... 2 750 mm (98.46 ... 108.27 inch) 2 751 ... 3 000 mm (108.31 ... 118.11 inch) 3 001 ... 3 250 mm (118.15 ... 127.95 inch) 3 251 ... 3 500 mm (127.99 ... 137.80 inch) 3 501 ... 3 750 mm (137.83 ... 147.64 inch) 3 751 ... 4 000 mm (147.68 ... 157.48 inch)	32 33 34 35 36 37 38 41 42 43 44 45 46 47 48
Material process connection/extension Stainless steel threads 304 (1.4301), flanges 321 (1.4541), Tri-clamp 304 (1.4301) ⁸⁾ Stainless steel 316L (1.4404) ⁹⁾	1 2
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM IEC-Ex t IIIC Da/Db EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H J
¹⁾ Available with Approval options A ... D, G only. ²⁾ Available with Approval options D, E, F only. ³⁾ Available with Approval options B, D, G only. ⁴⁾ Available with configurations 7ML5731-7AA11-1BA0 or 7ML5731-7AB11-1AA0 only. ⁵⁾ Basic version is cost effective and offers fast delivery. ⁶⁾ Not available with extension length options 11, 12, 31, 32. ⁷⁾ Max. 6 bar (87 psi). ⁸⁾ Available with option extension length 11 ... 28. ⁹⁾ Available with option extension length 31 ... 48.	


Selection and Ordering data	Order code	Selection and Ordering data	Article No.
Further Designs Please add "-Z" to Article No. and specify Order code(s).		SITRANS LVS200, short fork for liquids/solids interface Vibrating point level switch for short insertion and liquids/solids interface applications as well as high load applications with short insertion requirements.  7ML5732- A 0	
Total insertion length: Enter the total insertion length in plain text description, max. 4 000 mm (157.48 inch)	Y01	Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]: Measuring-point number/identification (max. 27 characters); specify in plain text	Y14	Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ⁶⁾	1
Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) ³⁾	K05	19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ⁶⁾	2
Enhanced sensitivity < 5 g/l via electronics, increased insertion length of 25 mm (0.98 inch), and increased aluminum fork width ¹⁾³⁾	G01	18 ... 50 V DC PNP ⁶⁾	3
Signal bulb inserted in M20 cable gland ²⁾	A20	19 ... 230 V AC/DC without contact, 2-wire loop powered ⁶⁾	4
NAMUR 8/16 mA switch amplifiers available, contact factory for pricing		8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ¹⁾	5
Operating Instructions	Article No.	Process temperature Without temperature isolator With temperature isolator	A B C
Multi-language	7ML19985FT63	Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process 150 °C (302 °F)/ max. temperature electronics 60 °C (140 °F)]	D
Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation		Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process 150 °C (302 °F)/ max. temperature electronics 60 °C (140 °F)]	
Spare Parts		Process connection Threaded	
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL	R 1½" [(BSPT), EN 10226]	A
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]	A5E35525363	1½" NPT [(Taper), ANSI/ASME B1.20.1]	B
Sliding sleeve, 2" BSP (ISO 228)	7ML1830-1JM	G 2" [(BSPP), EN ISO 228-1], sliding sleeve [min. length 500 mm (19.69 inch)] ²⁾	C
Sliding sleeve, 2" NPT (ASME B1.20.1)	7ML1830-1JN	2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)] ²⁾	D
Namur Isolator switch amplifier relay output KFD2-SR2-Ex1.W	A5E35667901	Flanged DN 100 PN 6, EN 1092-1, flat face ³⁾ DN 100 PN 16, EN 1092-1, flat face	E F
SITRANS LVS200, standard, power supply 7, process temperature A, process connection A, extension length 11, material process connection/ extension 1, and approval B	7ML5731-7AA11-1BA0	2" ASME 150 lb B16.5, raised face 3" ASME 150 lb B16.5, raised face 4" ASME 150 lb B16.5, raised face 2" Tri-clamp (DN 50) ISO 2852	G H J K
SITRANS LVS200, standard, power supply 7, process temperature A, process connection B, extension length 11, material process connection/ extension 1, and approval A	7ML5731-7AB11-1AA0	Extension length Stainless steel 304 (1.4301) Standard length, 165 mm (6.50 inch)	1 1
¹⁾ Available only with power supply 1 and Approval C, D and with Process connection flange E ... J.		Add Order code Y01 and plain text: "Insertion length ... mm"	
²⁾ Available with Approval option D only.		200 ... 500 mm (7.87 ... 19.69 inch)	1 2
³⁾ K05 and G01 are not available together.		501 ... 750 mm (19.72 ... 29.53 inch)	1 3
		751 ... 1 000 mm (29.57 ... 39.37 inch)	1 4
		1 001 ... 1 250 mm (39.41 ... 49.21 inch)	1 5
		1 251 ... 1 500 mm (49.25 ... 59.06 inch)	1 6
		1 501 ... 1 750 mm (59.09 ... 68.90 inch)	1 7
		1 751 ... 2 000 mm (68.94 ... 78.74 inch)	1 8
		2 001 ... 2 250 mm (78.78 ... 88.58 inch)	2 1
		2 251 ... 2 500 mm (88.62 ... 98.43 inch)	2 2
		2 501 ... 2 750 mm (98.46 ... 108.27 inch)	2 3
		2 751 ... 3 000 mm (108.31 ... 118.11 inch)	2 4
		3 001 ... 3 250 mm (118.15 ... 127.95 inch)	2 5
		3 251 ... 3 500 mm (127.99 ... 137.80 inch)	2 6
		3 501 ... 3 750 mm (137.83 ... 147.64 inch)	2 7
		3 751 ... 4 000 mm (147.68 ... 157.48 inch)	2 8

Level Measurement

Point level measurement

Vibrating switches

SITRANS LVS200

Selection and Ordering data	Article No.
SITRANS LVS200, short fork for liquids/solids interface Vibrating point level switch for short insertion and liquids/solids interface applications as well as high load applications with short insertion requirements.	7ML5732- 
<u>Stainless steel 316L (1.4404)</u> Standard length, 165 mm (6.50 inch) <u>Add Order code Y01 and plain text:</u> <u>"Insertion length ... mm"</u>	
200 ... 500 mm (7.87 ... 19.69 inch)	3 2
501 ... 750 mm (19.72 ... 29.53 inch)	3 3
751 ... 1 000 mm (29.57 ... 39.37 inch)	3 4
1 001 ... 1 250 mm (39.41 ... 49.21 inch)	3 5
1 251 ... 1 500 mm (49.25 ... 59.06 inch)	3 6
1 501 ... 1 750 mm (59.09 ... 68.90 inch)	3 7
1 751 ... 2 000 mm (68.94 ... 78.74 inch)	3 8
2 001 ... 2 250 mm (78.78 ... 88.58 inch)	4 1
2 251 ... 2 500 mm (88.62 ... 98.43 inch)	4 2
2 501 ... 2 750 mm (98.46 ... 108.27 inch)	4 3
2 751 ... 3 000 mm (108.31 ... 118.11 inch)	4 4
3 001 ... 3 250 mm (118.15 ... 127.95 inch)	4 5
3 251 ... 3 500 mm (127.99 ... 137.80 inch)	4 6
3 501 ... 3 750 mm (137.83 ... 147.64 inch)	4 7
3 751 ... 4 000 mm (147.68 ... 157.48 inch)	4 8
Material process connection/extension Stainless steel threads 304 (1.4301), flanges 321(1.4541), Tri-clamp 304 (1.4301) ⁴⁾ Stainless steel 316L (1.4404) ⁵⁾	1 2
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM IEC-Ex t IIIC Da/Db ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, CE, RCM EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H

¹⁾ Available with Approval options B, D, E only.

²⁾ Not available with extension length options 11,12,31,32.

³⁾ Max. 6 bar (87 psi).

⁴⁾ Available with option extension length 11 ... 28.

⁵⁾ Available with option extension length 31 ... 48.

⁶⁾ Power supply options 1, 2, 3, 4 not allowed with Approvals options F and H.

Selection and Ordering data	Order code
Further Designs Please add "-Z" to Article No. and specify Order code(s).	
Total insertion length: Enter the total insertion length in plain text description, max. 4 000 mm (147.48 inch)	Y01
Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text	Y14
Signal bulb inserted in M20 cable gland ¹⁾³⁾	A20
Note: G02 must be ordered for solids/liquids interface detection.	
Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ¹⁾²⁾⁴⁾	G02
Operating Instructions Multi-language Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	Article No. 7ML19985FT63
Spare Parts Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]	A5E35525363
Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KM
Sliding sleeve, 2" BSP (ISO 228)	7ML1830-1JM
Sliding sleeve, 2" NPT (ASME B1.20.1)	7ML1830-1JN

¹⁾ Available with Approval option D only.

²⁾ Available with power supply option 1 only.

³⁾ A20 not allowed with power supply options 4 or 5.

⁴⁾ G02 not allowed with process temperature options C or D.

Selection and Ordering data	Article No.
SITRANS LVS200, pipe extension Vibrating point level switch for high or low levels of bulk solids Extended using 1" pipe extension (customer supplied) ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5733-
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾ 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾ 18 ... 50 V DC PNP ¹⁾ 19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾ 7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾ 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾	1 2 3 4 5 6
Process temperature Up to 150 °C (302 °F)	A
Process connection <u>Threaded</u> R 1½" [(BSPT), EN 10226] 1½" NPT [(Taper), ANSI/ASME B1.20.1]	A B
<u>Flanged</u> DN 100 PN 6, EN 1092-1, flat face ⁴⁾ DN 100 PN 16, EN 1092-1, flat face 2" ASME 150 lb B16.5, raised face 3" ASME 150 lb B16.5, raised face 4" ASME 150 lb B16.5, raised face 2" Tri-clamp (DN 50) ISO 2852	C D E F G K
Process connection material Stainless steel threads 304 (1.4301), flanges 321 (1.4541), Tri-clamp 304 (1.4301) Stainless steel 316L (1.4404)	1 2
Extension length Customer supplied 1" pipe extension Length: 300 ... 3 800 mm (11.81 ... 149.61 inch)	1
Application type Dry bulk solids (125 Hz) Liquids/solids interface (350 Hz)	1 2
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM IEC-Ex t IIIC Da/Db EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H J

1) Available with Approval options A, B, C, D, G only.
 2) Available with Approval options D, E, F, J and application type 1 only.
 3) Available with Approval options B, D, F, G, H only.
 4) Max. 6 bar (87 psi).

Selection and Ordering data	Order code
Further Designs Please add "-Z" to Article No. and specify Order code(s). Total insertion length: Enter the total insertion length in plain text description, max. 3 800 mm (149.61 inch) Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) ⁵⁾ Enhanced sensitivity < 5 g/l via electronics, increased insertion length of 25 mm (0.98 inch) and increased aluminum fork width ¹⁾⁴⁾⁵⁾ Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ²⁾³⁾⁴⁾ Signal bulb inserted in M20 cable gland ²⁾⁶⁾	Y01 Y14 K05 G01 G02 A20
Operating Instructions Multi-language Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	Article No. 7ML19985FT63
Spare Parts Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)] Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)] Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)] NAMUR Isolated switch amplifier Relay output KFD2-SR2-Ex1.W	7ML1830-1KL A5E35525363 7ML1830-1KM A5E35667901



1) Available only with power supply 1 and Approvals C, D, and with Process connection flange C ... G.
 2) Available with Approval options D only.
 3) Available with Power supply option 1 only and application type 2.
 4) Not available with option K05.
 5) Available with Application type 1 only.
 6) A20 not allowed with Power supply options 4, 5, and 6.



Level Measurement

Point level measurement

Vibrating switches

SITRANS LVS200

Selection and Ordering data	Article No.
SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials 	7ML5734-
 Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	A 0
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾ 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾ 18 ... 50 V DC PNP ¹⁾ 19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾ 7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾⁵⁾ 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾	1 2 3 4 5 6
Process temperature Up to 80 °C (176 °F)	A
Process connection Threaded R 1½" [(BSPT), EN 10226] (1.4301/304) 1½" NPT [(Taper), ANSI/ASME B1.20.1] (1.4301/304) Flanged DN 100 PN 6, EN 1092-1 (1.4541/321), flat face ⁴⁾ DN 100 PN 16, EN 1092-1 (1.4541/321), flat face 2" ASME 150 lb B16.5 (1.4541/321), raised face 3" ASME 150 lb B16.5 (1.4541/321), raised face 4" ASME 150 lb B16.5 (1.4541/321), raised face	A B C D E F G
Extension length 750 ... 1 000 mm (29.5 ... 39.4 inch) [max. length 20 000 mm (787.4 inch), not with Power supply option 5 (max. 10 000 mm, 393.7 inch)] ⁶⁾ Add Order code Y01 and plain text: "Insertion length ... mm"	1 0
1 001 ... 2 000 mm (39.41 ... 78.74 inch) 2 001 ... 3 000 mm (78.78 ... 118.11 inch) 3 001 ... 4 000 mm (118.15 ... 157.48 inch) 4 001 ... 5 000 mm (157.52 ... 196.85 inch) 5 001 ... 6 000 mm (196.89 ... 236.22 inch) 6 001 ... 7 000 mm (236.26 ... 275.59 inch) 7 001 ... 8 000 mm (275.63 ... 314.96 inch) ⁵⁾ 8 001 ... 9 000 mm (315 ... 354.33 inch) ⁵⁾ 9 001 ... 10 000 mm (354.37 ... 393.70 inch) ⁵⁾ 10 001 ... 11 000 mm (393.74 ... 433.07 inch) ⁵⁾⁶⁾ 11 001 ... 12 000 mm (433.11 ... 472.44 inch) ⁵⁾⁶⁾ 12 001 ... 13 000 mm (472.48 ... 511.81 inch) ⁵⁾⁶⁾ 13 001 ... 14 000 mm (511.85 ... 551.18 inch) ⁵⁾⁶⁾ 14 001 ... 15 000 mm (551.22 ... 590.55 inch) ⁵⁾⁶⁾ 15 001 ... 16 000 mm (590.59 ... 629.92 inch) ⁵⁾⁶⁾ 16 001 ... 17 000 mm (629.96 ... 669.29 inch) ⁵⁾⁶⁾ 17 001 ... 18 000 mm (669.33 ... 708.66 inch) ⁵⁾⁶⁾ 18 001 ... 19 000 mm (708.70 ... 748.03 inch) ⁵⁾⁶⁾ 19 001 ... 20 000 mm (748.07 ... 787.40 inch) ⁵⁾⁶⁾	1 1 1 2 1 3 1 4 1 5 1 6 1 7 1 8 2 0 2 1 2 2 2 3 2 4 2 5 2 6 2 7 2 8 3 0 3 1
Application type Dry bulk solids (125 Hz) Liquids/solids interface detection, short insertion or heavier materials (350 Hz) ⁷⁾	1 2

Selection and Ordering data	Article No.
SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials 	7ML5734-
 Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	A 0
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM ⁶⁾ IEC-Ex t IIIC Da/Db EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H J
¹⁾ Available with Approval options A, B, C, D, G only. ²⁾ Available with Approval options D, E, and F only. Not available for application type 2 "Liquids/solids interface". ³⁾ Available with Approval option D only. ⁴⁾ Max. 6 bar (87 psi). ⁵⁾ Not available with Application type option 2. ⁶⁾ Not available with Power supply option 5. ⁷⁾ Cable length is limited to 7 000 mm (275.59 inch). ⁸⁾ Available with Power supply options 1 ... 4, and 6.	

Selection and Ordering data	Order code
Further Designs	
Please add "-Z" to Article No. and specify Order code(s).	
Enter the total insertion length in plain text description, max. 20 000 mm (787.40 inch)	Y01
Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text	Y14
Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) ⁵⁾	K05
Enhanced sensitivity < 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) and increased aluminum fork width ¹⁾⁴⁾	G01
Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ²⁾³⁾⁴⁾	G02
Signal bulb inserted in M20 cable gland ²⁾⁶⁾	A20
Operating Instructions	
Multi-language	Article No. 7ML19985FT63
Note: the Operating Instructions should be ordered as a separate line on the order.	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Spare Parts	
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]	A5E35525363
Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KM
NAMUR Isolated switch amplifier Relay output KFD2-SR2-Ex1.W	A5E35667901

- 1) Available only with power supply 1 and Approvals C, D, and with process connection flange C ... G.
2) Available with Approval options D only.
3) Available with Power supply option 1 and application type 2 only.
4) Not available with option K05.
5) Available with Application type 1 only.
6) A20 not allowed with Power supply 4, 5, or 6.

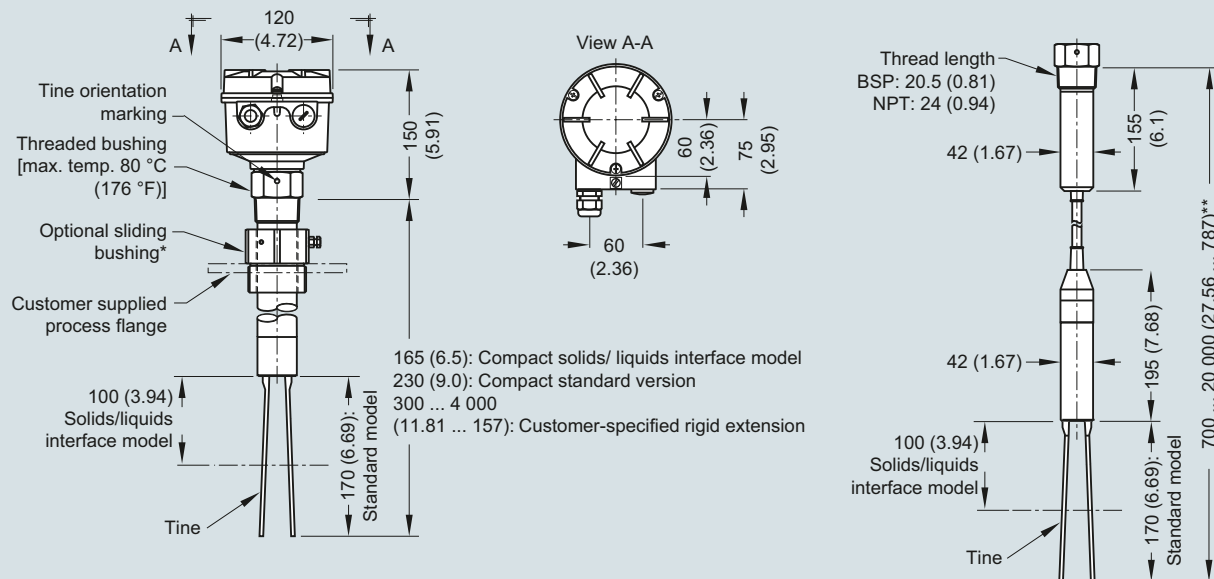
Level Measurement

Point level measurement

Vibrating switches

SITRANS LVS200

Dimensional drawings

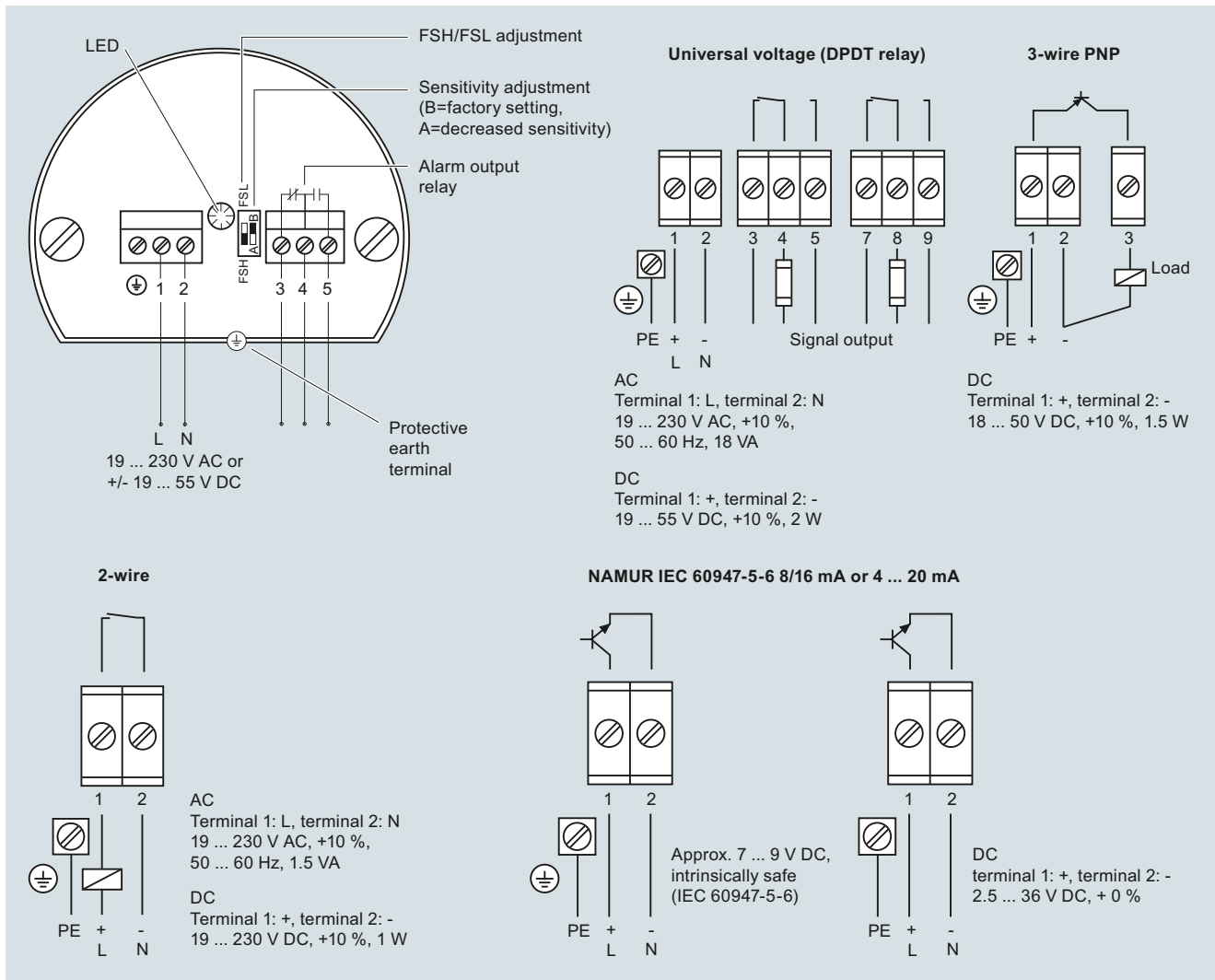


Notes:

- * The clamping screws of the sliding bushing must be tightened to 10 Nm.
- ** Cable version with liquids/solids interface model option length to 7 000 mm (275.59 inch)
Cable version with NAMUR electronics length to 10 000 mm (393.7 inch) tightened to 10 Nm.
See manual for pipe extended version details. (Pipe is customer supplied.)

SITRANS LVS200, dimensions in mm (inch)

Circuit diagrams



SITRANS LVS200 connections